USN | | | | | | | | | | 14SCS/SCE21

Second Semester M.Tech. Degree Examination, Dec.2015/Jan.2016
Managing Big Data

Time: 3 hrs.   Max. Marks:100

Note: *Answer any FIVE full questions.*

1   a. What is big data and why is it important? (06 Marks)
    b. Explain the expanding universe of unstructured data. (04 Marks)
    c. With an example, explain industry examples of big data. (10 Marks)

2   a. Explain open-source technology for big data analytics. (10 Marks)
    b. Explain the following:
       i)   Mobile business intelligence
       ii) Inter and trans firewall analytics (06 Marks)
    c. Why NOSQL? Explain the value of relational databases. (04 Marks)

3   a. With an example, explain relations and aggregate. (10 Marks)
    b. Explain the following:
       i)   Graph databases
       ii) Schemaless databases (06 Marks)
    c. Explain sharding and replication. (04 Marks)

4   a. With an example, explain a read-write conflict in logical consistency. (10 Marks)
    b. Explain the following:
       i)   Partitioning and combining
       ii) Composing map reduce calculations (10 Marks)

5   a. Explain the following Hadoop operations:
       i)   Analysing data with Hadoop
       ii) Hadoop streaming
       iii) Hadoop pipes (10 Marks)
    b. Explain the design of Hadoop distributed file system (HDFS). (10 Marks)

6   a. Explain the following:
       i) Hadoop I/O   ii) Data integrity   iii) Serialization (10 Marks)
    b. Explain unit tests with map deduce unit. (05 Marks)
    c. Explain anatomy of map reduce job run. (05 Marks)

7   a. With an example, explain failures in classic map reduce and YARN. (06 Marks)
    b. Explain the following map reduce types:
       i) Input formats   ii) Output formats (04 Marks)
    c. Explain the Dawn of big data. (05 Marks)
    d. Describe problem with relational database systems. (05 Marks)

8   a. Explain the Cassandra elevator piten. (10 Marks)
    b. Explain the following:
       i)   Hive data types and file formats
       ii) Hive QL data definition
       iii) Hive QL data manipulation (10 Marks)

* * * * *